Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Masco Cabinetry, LLC
Facility Name:	Masco Cabinetry – Merillat Mt. Jackson Plant
Facility Location:	1325 Industrial Park Road Mt. Jackson, Virginia 22842
Registration Number:	81062

This permit includes the following programs:
Federally Enforceable Requirements - Clean Air Act

Permit Number	Effective Date	Expiration Date
VRO 81062	October 1, 2019	September 30, 2024

_____
Deputy Regional Director

September 27, 2019_____
Signature Date

Permit consists of 71 pages.
Permit Conditions 1 to 157.
Table of Contents, 1 page.
Attachment A – Fabric Filter CAM Plan, 1 page.
Attachment B – RTO CAM Plan, 1 page.
Attachment C – Source Testing Report Format, 1 page.

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Facility Information

Permittee
Masco Cabinetry, LLC
P. O. Box 719
Mt. Jackson, Virginia 22842

Responsible Official
Harold Philbrick
Plant Manager

Facility
Masco Cabinetry – Merillat Mt. Jackson Plant
State Road 720 at Interstate 81 in Shenandoah County, Virginia

Contact Person
Samantha Steele
Human Resources Manager
(540) 477-2961

Facility Description: NAICS Code 337110 (Wood Kitchen Cabinet and Countertop Manufacturing) and SIC Code 2434 (Wood Kitchen Cabinets)

Masco Cabinetry, LLC (referred to herein as Masco, the company, or the permittee) manufactures wood cabinet components for kitchen and bath cabinets. The cabinets are made using a manufacturing process that involves several key stages with regulated emission units in each phase. The first step is to air dry the wood that is received from various lumber mills for up to 50 days to achieve a moisture content of 15 to 20 percent. The wood then enters one of the two drying kilns (DK1 or DK2) to lower the moisture content below 10 percent. Once the wood is dry, it moves through woodworking operations (W1) where it is cut, shaped, and sanded into the desired design based on the cabinet specifications. All woodworking operations have particulate matter emissions which are controlled by an extensive baghouse system that is completely enclosed.

Following the woodworking operations, some of the cabinet components enter gluing operations where lumber is glued to form panels, frames, or doors. Lastly, the cabinet will enter the finishing operations (F1), which are regulated by 40 CFR 63, Subpart JJ. Finishing operations involve various spray booths that are significant sources of volatile organic compounds (VOC's) and hazardous air pollutants (HAP's). The spray booths control devices include dry filters and a combination of dry filters and/or water wash along with a regenerative thermal oxidizer (RTO) on-site. At the final stage, the cabinets go through a sealer/sander function where particulate matter emissions are controlled by the baghouse system. The finished cabinets then enter a steam heated drying oven to cure before being packed and shipped.

In addition to the cabinet making process described above, Masco also produces a rigid thermo foil (RTF) product. The RTF production process is accomplished in two ways. In both scenarios, medium density fiber board (MDF) is delivered to the facility with a laminate already applied on one side. The boards are then machined to produce the appearance of a center panel with a decorative profile around the outer edge. At this point the process splits. In the first scenario, the fabricated MDF board is covered with a RTF product that is pre-coated with a heat-activated adhesive. The cabinet is then placed in a heated membrane press where using high heat and pressure, the RTF product is secured to the surface of the MDF board. The excess RTF is trimmed and the cabinet is readied for shipping. In the second scenario, the fabricated MDF board is put in an adhesive spray booth and coated with heat-resistant glue and hardener before the RTF material (without a pre-coated adhesive) is attached. The cabinet is then placed in the membrane press as described above, trimmed, and readied for shipping. The second scenario is necessary for customers who desire a heat resistant replacement door product.

All operations described above are supported by two boilers (B1 & B2) that supply heat for the wood drying kilns, finishing operations, and general plant heating. Boiler 1 is fired using wood dust that is collected by the baghouse system and is the primary boiler for the facility. Boiler 2 is used as a backup boiler and is fired with natural gas, the distillate oil is only used as a back-up fuel. Both boilers are subject to 40 CFR 63, Subpart DDDDD. The facility also houses two emergency fire water pumps (FP1 & FP2) that are regulated by 40 CFR 63, Subpart ZZZZ.

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date**
Fuel Burning Equipment							
B1	BS1	Industrial Wood-fired Boiler Model 3-3900-150-HRT (1987)	28.5 MMBtu/hr	Zurn Multicyclone	M1	PM PM-10	11/18/02, as amended 10/13/17
				Electrostatic Precipitator	EP1	PM PM-10	---
B2	BS2	Superior Boiler Works Natural gas and distillate oil (1987)	14.7 MMBtu/hr	---	---	---	11/18/02, as amended 10/13/17
FP1	FPS1	Caterpillar Diesel Fire Water Pump (1986 or earlier) Model 3208-DINA	121 HP	---	---	---	---
FP2	FPS2	Caterpillar Diesel Fire Water Pump (1986 or earlier) Model 3306	287 HP	---	---	---	---
Woodworking Operations							
W1	BHS1-BHS4	Miscellaneous Woodworking Equipment	Various	Pneumafil fabric filters Model 13.5-448-10	BH1-BH4	PM PM-10	11/18/02, as amended 10/13/17
W1	BHS5	Miscellaneous Woodworking Equipment	Various	Pneumafil fabric filter Model 15-470-12	BH5	PM PM-10	
W1	BHS6	Miscellaneous Woodworking Equipment	Various	Waltz-Holst Fabric Filter Model 12-456-7045	BH6	PM PM-10	

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date**
W1	BHS7	Waste Wood Loadout System	Various	Pneumafil fabric filter Model 11.5-316-8	BH7	PM PM-10	
Finishing Operations							
F1	FS1-FS11, BHS6, OS1-OS26	One Automatic Sealer/Sander; One Stand Alone Hand Spray Booth; One RTF Adhesive Spray Booth; and One Finishing Line Consisting of One Sap Stain Booth, One Staining/Primer Booth, One Sealer/Enamel Booth, and One Top Coat Spraying Booth with Drying Ovens and Microprocessor Controlled Automatic Spraying and Air-assisted Airless Spraying Guns	Various	Sealer/Enamel Booth and Topcoat Booth: Regenerative Thermal Oxidizer (RTO) Spray booths: Water Wash and/or Dry Filter Automatic Sealer/Sander: Pneumafil Fabric Filter Model 8.5-156-10	F01-F06, BH6, RTO	RTO: VOC All Else: PM PM-10	11/18/02, as amended 10/13/17
Kilns							
DK1, DK2		Dry kilns		---	---	---	---

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

**The PSD Permit was issued on 11/18/2002 and amended on 2/8/2006, 2/22/2008, 1/12/2009, 5/26/2009, 8/12/2010, 1/28/2011, 2/15/2011, and 10/13/2017. It will be referred to herein as "11/18/02 Permit as amended 10/13/17).

Fuel Burning Equipment Requirements – Units B1 & B2

1. **Limitations –** Particulate emissions from the wood-fired boiler (B1) shall be controlled by a multicyclone (M1). The multicyclone shall be provided with adequate access for inspection. (9 VAC 5-80-110 and Condition 1 of 11/18/02 Permit as amended 10/13/17)

2. **Limitations –** The approved fuel for the wood-fired boiler (B1) is waste wood and sawdust. The approved fuels for the natural gas/distillate oil boiler (B2) are natural gas and distillate oil. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 2 of 11/18/02 Permit as amended 10/13/17)

3. **Limitations –** The distillate oil used by the natural gas/distillate oil boiler (B2) shall meet ASTM D396 specification for numbers 1 or 2 fuel oil with no more than an average 0.34 percent by weight sulfur content per shipment.
(9 VAC 5-80-110 and Condition 3 of 11/18/02 Permit as amended 10/13/17)

4. **Limitations –** Emissions from the operation of the Industrial wood-fired boiler (B1) shall not exceed the limits specified below:

Particulate Matter	0.25 lb/MMBtu	17.9 tons/yr
PM-10	0.25 lb/MMBtu	17.9 tons/yr
Sulfur Dioxide	0.26 lb/hr	1.1 tons/yr
Nitrogen Oxides (as NO_2)	1.16 lb/hr	5.1 tons/yr
Carbon Monoxide	6.80 lb/hr	29.8 tons/yr
Volatile Organic Compounds (VOC)	2.38 lb/hr	10.4 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 1, 2, and 6.
(9 VAC 5-80-110 and Condition 4 of 11/18/02 Permit as amended 10/13/17)

5. **Limitations –** Emissions from the operation of the natural gas/distillate oil boiler (B2) shall not exceed the limits specified below:

PM	0.014 lb/MMBtu	0.9 tons/yr
Sulfur Dioxide	0.35 lb/hr	22.4 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from

operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these limits may be determined as stated in Conditions 2, 3, and 6.
(9 VAC 5-80-110 and Condition 5 of 11/18/02 Permit as amended 10/13/17)

6. **Limitations –** Visible emissions from the wood-fired boiler (B1) stack and the natural gas/distillate oil boiler (B2) stack shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity. This condition applies at all times except during startup, shutdown, or malfunction. (9 VAC 5-50-80, 9 VAC 5-80-110, and Condition 6 of 11/18/02 Permit as amended 10/13/17)

7. **Limitation –** The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

   a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

   b. Maintain an inventory of spare parts.

   c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

   d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training, and the nature of the training.

   (9 VAC 5-80-110 and Condition 53 of 11/18/02 Permit as amended 10/13/17)

8. **Monitoring –** The permittee shall determine compliance with the annual particulate emission limits in Condition 4 for Boiler B1 by using the following procedure:

   a. Calculate the average heat input capacity of the boiler based on the average steam production using the following formula:

$$C = \frac{SH}{E\,10^{6}}$$

……..Equation 1

C = computed average heat input capacity in million Btu per hour

S = steam production in pounds per hour

H = 1040 Btu/lb (heat content of the wood)

E = 0.71 (boiler efficiency)

b. Calculate the tons of particulate emitted based on the computed average heat input capacity from Equation 1, using the following formula:

$$E = \frac{CLT}{2000}$$

……..Equation 2

E = the PM/PM-10 emissions in tons per month

C = computed average heat input capacity from Equation 1

L = 0.25 lb/mmBtu (particulate limit)

T = time boiler in operation in hours per month

(9 VAC 5-80-110 and Attachment B of 11/18/02 Permit as amended 10/13/17)

9. **Monitoring –** The multicyclone (M1) shall be equipped with a device to continuously measure the differential pressure drop across the multicyclone. The device shall be installed, maintained, calibrated, and operated in accordance with approved procedures which shall include, at a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the multicyclone is operating. The permittee shall establish a normal operating range for the differential pressure drop across the multicyclone, based on manufacturer's recommendations or developed from observations recorded from the monitoring devices during normal operation. The permittee shall maintain written documentation of this range. The monitoring device used to continuously measure differential pressure across the multicyclone shall be observed by the permittee with a frequency of not less than once every eight hours of the Industrial wood-fired boiler (B1) operation. If the observed differential pressure drop is outside the normal operating range, the permittee shall take corrective action to restore the pressure drop to within the normal operating range. The permittee shall keep a log of the observations that includes, at a minimum, the name of the observer, the date and time of the observation, the differential pressure reading, any corrective measures taken, and hours of operation of the Industrial wood-fired boiler (B1) operation.
(9 VAC 5-80-110)

10. **Monitoring –** The permittee shall conduct an annual internal inspection on the multicyclone (M1) to ensure structural integrity.
(9 VAC 5-80-110 and Condition 1 of 11/18/02 Permit as amended 10/13/17)

11. **Recordkeeping –** The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:

a. The name of the fuel supplier;

b. The date on which the distillate oil was received;

c. The volume of distillate oil delivered in the shipment;

d. A statement that the oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2; and

e. The sulfur content of the distillate oil.

(9 VAC 5-80-110 and Condition 3 of 11/18/02 Permit as amended 10/13/17)

12. **Recordkeeping –** The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

a. The monthly and annual throughput of natural gas (in million cubic feet) and distillate oil (in 1,000 gallons) for the natural gas/distillate oil boiler (B2). The annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.

b. The DEQ-approved, pollutant specific emission factors and the equations used to demonstrate compliance with Condition 4 and Condition 5.

c. Operating hours for the wood-fired boiler (B1), recorded daily.

d. Steam pressure (psi) of the wood-fired boiler (B1), recorded hourly.

e. Multicyclone (M1) pressure drop readings recorded once every eight hours of wood-fired boiler (B1) operation as required in Condition 9.

f. Multicyclone (M1) annual inspection results as required in Condition 10 and including:

(1) The date, time, and name of person performing each inspection;

(2) A list of the items inspected; and

(3) Any maintenance or repairs performed as a result of these inspections.

g. Monthly and annual emissions (tons) for the wood-fired boiler (B1) and natural gas/distillate oil boiler (B2), calculated monthly as required by Conditions 4 and 5. Particulate emissions form the wood-fired boiler (B1) shall be calculated using the procedure provided in Condition 8.

h. Results of all stack tests and visible emissions observations and/or evaluations.

i. Records of maintenance, operating procedures, and training as required by Condition 7.

j. All fuel supplier certifications as required by Condition 11.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-50-50, 9 VAC 5-80-110, and Condition 37 of 11/18/02 Permit as amended 10/13/17)

13. **Testing –** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

Boiler MACT Requirements (NESHAP for Industrial/ Commercial/ Institutional Boilers and Process Heaters - 40 CFR 63, Subpart DDDDD) - Units B1 & B2

The following terms and conditions are from 40 CFR Part 63, Subpart DDDDD. A current copy of 40 CFR Part 63, Subpart DDDDD can be accessed at http://www.ecfr.gov/ by selecting Title 40. As used in this section, all terms shall have the meaning as defined in 40 CFR 63.2 and 40 CFR 63.7575.

14. **Operating Limits** – At all times, you must operate and maintain Boilers B1 and B2, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to DEQ that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

    (9 VAC 5-80-110 and 40 CFR 63.7500(a)(3))

15. **Annual Tune-Up** - You must conduct a performance tune-up annually for each Boiler B1 and B2, following the specifications below. Each annual tune-up must be conducted no more than 13 months after the previous tune-up. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

    a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

    b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

    c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

    d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject;

    e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements

may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

f. Maintain on-site and submit, if requested by DEQ, a report containing the information in paragraphs (i) through (iii) below:

(1) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(2) A description of any corrective actions taken as a part of the tune-up; and

(3) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

(9 VAC 5-80-110, 40 CFR 63.7500(a)(1), 40 CFR 63.7515(d), 40 CFR 7540(a)(10) and (13), and Table 3 of 40 CFR 63, Subpart DDDDD)

16. **Limitations** – Emissions from Boiler B1 shall not exceed the limits specified below:

Emission Unit	Pollutant	Heat Input-based limits	Steam Output-based limits
		(lb/MMBtu, unless indicated otherwise)	(lb/MMBtu)
B1	CO	2,400 ppm by volume on a dry basis corrected to 3 percent oxygen	1.9
	PM (filterable)	5.1E-02	5.2E-02
	HCl	2.2E-02	2.5E-02
	Hg	5.7E-06	6.4E-06

The limits apply to you at all times Boiler (B1) is operating except for the periods noted in Conditions 18 and 19.

(9 VAC 5-80-110, 40 CFR 63.7500(a)(1), 40 CFR 63.7505(a) and Table 2 of 40 CFR 63, Subpart DDDDD)

17. **Limitations** – The permittee must maintain opacity of Boiler B1 to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average) in Condition 16.

(9 VAC 5-80-110, 40 CFR 63.7500(a)(2), and Item 4.a of Table 4 of 40 CFR 63, Subpart DDDDD)

18. **Work Practice Standards: Startup** – For Boilers B1 and B2, the following work practice standards apply during startup of each unit:

a. You must operate all continuous monitoring systems (CMS) during startup;

b. For startup of a boiler, you must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and total selected metals (TSM) emission standards by fuel analysis.

c. You have the option of complying using either of the following work practice standards:

(1) If you choose to comply using definition (1) of "startup" in 40 CFR 63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR

(2) If you choose to comply using definition (2) of "startup" in 40 CFR 63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in 40 CFR 63.7505(e).

d. You must comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in 40 CFR 63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555.

(9 VAC 5-80-110, 40 CFR 63.7500(f) and Item 5 of Table 3 of 40 CFR 63, Subpart DDDDD)

19. **Work Practice Standards: Shutdown** - For each Boiler B1 and B2, the following work practice standards apply during shutdown of each unit:

a. You must operate all CMS during shutdown.

b. While firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.

c. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.

d. You must comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in 40 CFR 63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in 40 CFR 63.7555.

(9 VAC 5-80-110, 40 CFR 63.7500(f), 40 CFR 63.7505(a), and Item 6 of Table 3 of 40 CFR 63, Subpart DDDDD)

20. **General Compliance Requirements** - If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in (a) through (d) for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under 40 CFR 63.8(f).

a. For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to DEQ for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in 40 CFR 63.8(d) and the elements described in paragraphs (i) through (iii) below. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to 40 CFR 60 and that meet the requirements of 40 CFR 63.7525. Using the process described in 40 CFR 63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(1) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(2) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(3) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

b. In your site-specific monitoring plan, you must also address paragraphs (i) through (iii) below.

(1) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(2) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 63.8(d); and

(3) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR 63.10(c) (as applicable in Table 10 to 40 CFR 63, Subpart DDDDD), (e)(1), and (e)(2)(i).

c. You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

d. You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(9 VAC 5-80-110, 40 CFR 63.7505(d), and 40 CFR 63.7535(a))

21. **General Compliance Requirements** - If you have an applicable emission limit, and you choose to comply using definition (2) of "startup" in 40 CFR 63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to 40 CFR 63, Subpart DDDDD. The SSP must be maintained onsite and available upon request for public inspection.

(9 VAC 5-80-110 and 40 CFR 63.7505(e))

22. **General Compliance Requirements** – The facility shall meet the General Provision requirements in 40 CFR 63.1 through 40 CFR 63.15 as applicable to Boilers B1 and B2.

(9 VAC 5-80-110, 40 CFR 63.7565, and Table 10 to 40 CFR 63, Subpart DDDDD)

23. **Monitoring** – For Boiler B1, you must install, operate, and maintain an oxygen analyzer system, which determines the oxygen content of a gas stream and is used to monitor oxygen in the boiler.

(9 VAC 5-80-110, 40 CFR 63.7525(a), 40 CFR 63.7535 (b) (c) and (d), and 40 CFR 63.7575)

24. **Monitoring** - You must install, operate, certify and maintain the COMS for Boiler B1 according to the procedures specified in paragraphs (a) through (g) below:

a. Each COMS must be installed, operated, and maintained according to Performance Specification 1 at 40 CFR 60, Appendix B.

b. You must conduct a performance evaluation of each COMS according to the requirements in 40 CFR 63.8(e) and according to Performance Specification 1 at 40 CFR 60, Appendix B.

c. As specified in 40 CFR 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

d. The COMS data must be reduced as specified in 40 CFR 63.8(g)(2).

e. You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in 40 CFR 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

f. You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of 40 CFR 63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

g. You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(9 VAC 5-80-110 and 40 CFR 63.7525(c))

25. **Monitoring** – The monitoring systems and data collection for Boiler B1 shall meet the following:

a. You must monitor and collect data according to this section and the site-specific monitoring plan required by 40 CFR 63.7505(d).

b. You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see 40 CFR 63.8(c)(7) and Table 10 to 40 CFR 63, Subpart DDDDD), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

c. You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance

or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

d. Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

(9 VAC 5-80-110 and 40 CFR 63.7535(a) through (d))

26. **Monitoring: Opacity** – You must show continuous compliance with the emission limitations for opacity for Boiler B1 according to the following:

    a. Collecting the opacity monitoring system data according to 40 CFR 63.7525(c), 40 CFR 63.7535, and Condition 25;

    b. Reducing the opacity monitoring data to 6-minute averages; and

    c. Maintaining daily block average opacity to less than or equal to 10 percent or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation.

    (9 VAC 5-80-110, 40 CFR 63.7535, 40 CFR 63.7540(a), and Item 1 of Table 8 of 40 CFR 63, Subpart DDDDD)

27. **Monitoring: Oxygen Content** – You must show continuous compliance with the limitations for the oxygen content for Boiler B1 according to the following:

    a. Continuously monitor the oxygen content using an oxygen analyzer system according to 40 CFR 63.7525(a), and Conditions 23 and 25;

    b. Reducing the data to 30-day rolling averages; and

c. Maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen level measured during the CO performance test.

(9 VAC 5-80-110, 40 CFR 63.7535, 40 CFR 63.7540(a), and Item 9 of Table 8 of 40 CFR 63, Subpart DDDDD)

28. **Records -** The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

a. For Boilers B1 and B2:

(1) A copy of each notification and report that you submitted to comply with 40 CFR 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv);

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii)

b. For Boiler B1:

(1) For each COMS and continuous monitoring system, you must keep the following records:

(i) Records described in 40 CFR 63.10(b)(2)(vii) through (xi).

(ii) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in 40 CFR 63.6(h)(7)(i) and (ii).

(iii) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).

(iv) Request for alternatives to relative accuracy test for CEMS as required in 40 CFR 63.8(f)(6)(i).

(v) Records of the date and time that each deviation started and stopped.

(2) Records required in Table 8 of 40 CFR 63, Subpart DDDDD, and Conditions 26 and 27, including records of all monitoring data and calculated averages for applicable operating limits (opacity, pressure drop, pH, operating load, etc.), to show continuous compliance with each emission limit and operating limit that applies to you.

(3) Records of monthly fuel use by the boiler, including the type(s) of fuel and amount(s) used.

(4) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of 40 CFR 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of 40 CFR 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing.

(6) If, consistent with Condition 30, you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to 40 CFR 63, Subpart DDDDD, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(7) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment

(8) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(9) Records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) Records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to 40 CFR 63.7533, you must keep a copy of the Implementation Plan required in 40 CFR 63.7533(d) and copies of all data and calculations used to establish credits according to 40 CFR 63.7533(b), (c), and (f).

Your records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). As specified in 40 CFR 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). You can keep the records off site for the remaining 3 years.

(9 VAC 5-80-110, 40 CFR 63.7540(a)(7), 40 CFR 63.7555 and 40 CFR 63.7560)

29. **Testing** - The permittee shall maintain the 30-day rolling average operating load of Boiler B1 such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.

    (9 VAC 5-80-110, 40 CFR 63.7500(a)(2), and Item 7 of Table 4 of 40 CFR 63, Subpart DDDDD)

30. **Testing** – For Boiler B1, you must conduct all applicable performance tests according to 40 CFR 63.7520 on an annual basis, except as specified in paragraphs (a) and (b) below. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (a) and (b) below.

    a. If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit for the pollutant, and if there are no changes in the operation of the individual boiler or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test. If you elect to demonstrate compliance using emission averaging under 40 CFR 63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

    b. If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Condition 16) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Condition 16).

    Notification of Intent to conduct a performance test must be submitted at least 60 days before the performance test is scheduled to begin.
    (9 VAC 5-80-110, 40 CFR 63.7515(a) through (c), 40 CFR 63.7520, 40 CFR 63.7545(d))

31. **Testing** - You must conduct all performance tests according to 40 CFR 63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in 40 CFR 63.7(c). You shall conduct all performance tests under such conditions as DEQ specifies to you based on the representative performance of each boiler or process heater for the period being tested. Upon request, you shall make available to DEQ such records as may be necessary to determine the conditions of the performance tests.

    (9 VAC 5-80-110 and 40 CFR 63.7520(a))

32. **Testing** - You must conduct each performance test for Boiler B1 according to the requirements and under the specific conditions in Tables 5 and 7 to 40 CFR 63, Subpart DDDDD. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and

mercury and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.

(9 VAC 5-80-110, 40 CFR 63.7520(b) and (c) and Tables 4, 5 and 7 to 40 CFR 63, Subpart DDDDD)

33. **Testing** - The permittee must conduct a minimum of three separate test runs for each performance test, as specified in 40 CFR 63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to 40 CFR 63, Subpart DDDDD. To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of 40 CFR 60, Appendix A-7, Method 19 to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

    (9 VAC 5-80-110 and 40 CFR 63.7520(d) and (e))

34. **Reporting: Tune-Ups** – For Boilers B1 and B2, a compliance report must contain the following information:

    a. Company and Facility name and address.

    b. Process unit information, emissions limitations, and operating parameter limitations.

    c. Date of report and beginning and ending dates of the reporting period.

    d. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up. Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown.

    e. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

    (9 VAC 9-80-110 and 40 CFR 63.7550(c))

35. **Reporting** - You must submit each report in Table 9 to 40 CFR 63, Subpart DDDDD that applies to Boilers B1 and B2. Boiler B1 is subject to semi-annual compliance reporting. Boiler B2 is subject to annual compliance reporting. Each semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Each annual compliance report must cover the annual reporting period from January 1 through

December 31. Each annual compliance report must be postmarked or submitted no later than January 31.

(9 VAC 5-80-110, 40 CFR 63.7495 and 40 CFR 63.7550(b))

36. **Reporting** - If you are complying with an emissions limit in Condition 16, for Boiler B1, with performance testing you must submit a compliance report with the following information;

    a. Company and Facility name and address.

    b. Process unit information, emissions limitations, and operating parameter limitations.

    c. Date of report and beginning and ending dates of the reporting period.

    d. The total fuel use by each individual boiler subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

    e. If you are conducting performance tests once every 3 years consistent with 40 CFR 63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

    f. A statement indicating that you burned no new types of fuel in an individual boiler subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of 40 CFR 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing. If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of 40 CFR 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing. If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of 40 CFR 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing.

    g. If you wish to burn a new type of fuel in an individual boiler subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of 40 CFR 63.7530 or the maximum mercury input operating limit using Equation 8 of 40 CFR 63.7530, or the maximum TSM input operating limit using Equation 9 of 40 CFR 63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

    h. If there are no deviations from any emission limits or operating limits in 40 CFR 63, Subpart DDDDD that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

i. If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler or associated air pollution control device or CMS to minimize emissions in accordance with 40 CFR 63.7500(a)(3), including actions taken to correct the malfunction.

j. If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in 40 CFR 63.7545(e)(5)(i).

k. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

l. For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of 40 CFR 63.7555(d).

m. The information required in Condition 37, if applicable.

(9 VAC 5-80-110 and 40 CFR 63.7555(c)(3))

37. **Reporting: Boiler B1** - If you are complying with an emissions limit in Condition 16, using a CMS for Boiler B1, the compliance report must contain the information required below:

a. Company and Facility name and address.

b. Process unit information, emissions limitations, and operating parameter limitations.

c. Date of report and beginning and ending dates of the reporting period.

d. The monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

e. The total fuel use by each individual boiler subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

f. If there are no deviations from any emission limits or operating limits in 40 CFR 63, Subpart DDDDD that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

g. If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in 40 CFR 63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

h. If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler or associated air pollution control device or CMS to minimize emissions in accordance with 40 CFR 63.7500(a)(3), including actions taken to correct the malfunction.

i. If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in 40 CFR 63.7545(e)(5)(i).

j. For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO_2, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

k. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

l. For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of 40 CFR 63.7555(d).

(9 VAC 5-80-110 and 40 CFR 63.7555(c)(4))

38. **Reporting** - For each deviation from an emission limit or operating limit in 40 CFR 63, Subpart DDDDD that occurs at an individual boiler or process heater from the work practice standards for periods if startup and shutdown, the compliance report must additionally contain the information required in (a) through (c) below.

a. A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

b. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

c. If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(9 VAC 5-80-110 and 40 CFR 63.7550(d))

39. **Reporting** - For each deviation from an emission limit, operating limit, and monitoring requirement in 40 CFR 63, Subpart DDDDD occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (a)

through (i) below. This includes any deviations from your site-specific monitoring plan as required in Condition 20.

a. The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

b. The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

c. The date, time, and duration that each CMS was out of control, including the information in 40 CFR 63.8(c)(8).

d. The date and time that each deviation started and stopped.

e. A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

f. A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

g. A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

h. A brief description of the source for which there was a deviation.

i. A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(9 VAC 5-80-110 and 40 CFR 63.7550(e))

40. **Reporting** - You must submit the reports for Boilers B1 and B2 according to the procedures specified in paragraphs (a) and (b) below:

a. Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by Conditions 20 or 30, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph a.i or a.ii below.

(1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (http://www.epa.gov/ttn/chief/ert/index.html), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's

ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13.

b. You must submit all reports required by Table 9 of 40 CFR 63, Subpart DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for 40 CFR 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for Subpart DDDDD, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to 40 CFR 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, you must submit the report to EPA at the appropriate address listed in 40 CFR 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

(9 VAC 5-80-110 and 40 CFR 63.7550(h))

Fuel Burning Equipment Requirements – Units FP1 & FP2

The following terms and conditions are from 40 CFR Part 63, Subpart ZZZZ. A current copy of 40 CFR Part 63, Subpart ZZZZ can be accessed at http://www.ecfr.gov/ by selecting Title 40. As used in this section, all terms shall have the meaning as defined in §63.2 and §63.6675.

41. **Limitations –** In order for the fire water pumps to be considered an emergency stationary reciprocating internal combustion engine (RICE) under 40 CFR 63, Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in paragraphs a through c below, is prohibited. If the permittee does not operate the fire water pumps according to the requirements of paragraphs a through c, they will not be considered emergency engines under 40 CFR 63, Subpart ZZZZ and shall meet all requirements for nonemergency engines.

    a. There is no time limit on the use of the emergency stationary RICE in emergency situations.

    b. The permittee may operate the fire water pumps (FP1 & FP2) for any combination of the purposes specified in b(1) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 41.c counts as part of the 100 hours per calendar year allowed by Condition 41.b.

        (1) The permittee may operate the fire water pumps (FP1 & FP2) for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

    c. The permittee may operate the fire water pumps (FP1 & FP2) up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing provided for in Condition 41. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

    (9 VAC 5-80-110, 40 CFR 63.6640(f), and 40 CFR 63, Subpart ZZZZ)

42. **Limitations –** The fire water pumps (FP1 & FP2) shall comply with the maintenance requirements specified in sections 1 (a) through (c) of Table 2c to Subpart ZZZZ:

a. Change oil and filter every 500 hours of operation or annually, whichever comes first, or at an extended frequency if utilizing an oil analysis program as described in §63.6625(i) and Condition 43 below;

b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

(9 VAC 5-80-110, 40 CFR 63.6602 and Table 2c of 40 CFR 63, Subpart ZZZZ)

43. **Limitations –** The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 42. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 42. The analysis program must, at a minimum, analyze the following three parameters and if the corresponding condemning limit for each parameter is not exceeded, the permittee is not required to change the oil.

    a. Total Base Number must be analyzed and be less than 30 percent of the Total Base Number of the oil when new.

    b. Viscosity of the oil must be analyzed and have not changed by more than 20 percent from the viscosity of the oil when new.

    c. Percent water content of the oil must be analyzed and be (by volume) not be greater than 0.5.

    If any of the limits listed above are exceeded, the permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.
    (9 VAC 5-80-110, 40 CFR 63.6625 (i), and 40 CFR 63, Subpart ZZZZ)

44. **Limitations –** The permittee shall operate and maintain the fire water pumps (FP1 & FP2) according to the manufacturer's emission-related written instructions or develop a maintenance plan that provides, to the extent practicable, for the maintenance and operation of each fire water pump in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to, review of operation and maintenance procedures and records and inspection of the source.
    (9 VAC 5-80-110, 40 CFR 63.6625(e), 40 CFR 63.6605(b), and 40 CFR 63, Subpart ZZZZ)

45. **Limitations –** During periods of startup the permittee must minimize the time spent at idle for the fire water pumps (FP1 & FP2) and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations in Condition 42 apply.
(9 VAC 5-80-110, 40 CFR 63.6625(h), and 40 CFR 63, Subpart ZZZZ)

46. **Limitations –** The permittee shall continually comply with the work practice standards in Condition 42 by:

    a. Operating and maintaining the fire water pumps (FP1 & FP2) according to the manufacturer's emission-related operation and maintenance instructions; or

    b. Developing and following its own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

    (9 VAC 5-80-110, 40 CFR 63.6640(a) and Table 6 of 40 CFR 63, Subpart ZZZZ)

47. **Monitoring –** The permittee shall install a non-resettable hour meter on the fire water pumps (FP1 & FP2) if one is not already installed. The hour meter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 40 CFR 63.6625(f), and 40 CFR 63, Subpart ZZZZ)

48. **Recordkeeping –** The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. Records of the maintenance conducted on the fire water pumps (FP1 & FP2) in order to demonstrate that each engine is operated and maintained according to the maintenance plan required by Condition 44.

    b. Records of the hours of operation of the fire water pumps (FP1 & FP2) that are recorded on a non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation.

    c. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 44, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation, as applicable.

    These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
    (9 VAC 5-80-110, 40 CFR 63.6655(e) and (f), and 40 CFR 63, Subpart ZZZZ)

49. **Testing –** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate method(s) in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

50. **Reporting –** If the fire water pumps (FP1 & FP2) are operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements listed in Condition 42, or if performing the work practice in Condition 42 would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice listed in Condition 42 and the federal, state, or local law under which the risk was deemed unacceptable.
(9 VAC 5-80-110 and Footnote 1 of Table 2c of 40 CFR 63, Subpart ZZZZ)

Woodworking Equipment Requirements – Unit W1

51. **Limitations –** Particulate emissions from the woodworking equipment and waste wood load-out system shall be controlled by fabric filters (BH1-7). All transfer of the collected material from the woodworking equipment shall be controlled by a fabric filter and/or a completely enclosed transfer system. The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 7 of 11/18/02 Permit as amended 10/13/17)

52. **Limitations –** Fugitive particulate emissions from the collection and transferring of collected wood waste shall be controlled by complete enclosure.
(9 VAC 5-80-110 and Condition 9 of 11/18/02 Permit as amended 10/13/17)

53. **Limitations –** The annual throughput of wood for the manufacture of wood cabinets shall not exceed 38,325,000 board feet, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-110 and Condition 10 of 11/18/02 Permit as amended 10/13/17)

54. **Limitations –** Total emissions from the fabric filter exhausts (BHS1-BHS7) from the operation of the woodworking equipment (W1) shall not exceed the limits specified below:

Particulate Matter (PM)	0.0022 gr/dscf	31.6 tons/yr
PM-10	0.0022 gr/dscf	31.6 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 51, 53, and 55.
(9 VAC 5-80-110 and Condition 11 of 11/18/02 Permit as amended 10/13/17)

55. **Limitations –** Visible emissions from the woodworking equipment fabric filters (BH1-7) shall not exceed five percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-110 and Condition 12 of 11/18/02 Permit as amended 10/13/17)

56. **Limitations –** Visible emissions from any woodworking equipment fugitive emission points shall not exceed ten percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-110 and Condition 13 of 11/18/02 Permit as amended 10/13/17)

57. **Limitations –** The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

    b. Maintain an inventory of spare parts.

    c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    (9 VAC 5-80-110 and Condition 53 of 11/18/02 Permit as amended 10/13/17)

58. **Monitoring –** Each woodworking equipment fabric filter (BH1-7) shall be equipped with a device to continuously measure the pressure drop across each fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the woodworking equipment fabric filter is operating. The permittee shall establish a normal operating range for the differential pressure drop across each fabric filter, based on manufacturer's recommendations or developed from observations recorded from the monitoring devices during normal operation. The permittee shall maintain written documentation of these ranges.

    The monitoring device used to continuously measure differential pressure across the fabric filters (BH1- BH7) shall be observed by the permittee with a frequency of not less than once per day of operation. If the observed differential pressure drop is outside the normal operating range, the permittee shall take corrective action to restore the pressure drop to within the normal operating range. The permittee shall keep a log of the observations that includes, at a minimum, the name of the observer, the date and time of the observation, which fabric filter is being observed, the differential pressure reading, and any corrective measures taken.
    (9 VAC 5-80-110 and Condition 8 of 11/18/02 Permit as amended 10/13/17)

59. **Compliance Assurance Monitoring (CAM) –** The permittee shall monitor, operate, calibrate and maintain the fabric filters (BH1- BH7) controlling the woodworking equipment (W1) as specified in Attachment A (Fabric Filter Compliance Assurance Monitoring Plan).
    (9 VAC 5-80-110 E and 40 CFR 64.6 (c))

60. **Compliance Assurance Monitoring (CAM) –** The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
(9 VAC 5-80-110 E and 40 CFR 64.6 (c))

61. **Compliance Assurance Monitoring (CAM) –** At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
(9 VAC 5-80-110 E and 40 CFR 64.7 (b))

62. **Compliance Assurance Monitoring (CAM) –** Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the woodworking equipment (W1) is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.
(9 VAC 5-80-110 E and 40 CFR 64.7 (c))

63. **Compliance Assurance Monitoring (CAM) –** Upon detecting an excursion or exceedance, the permittee shall restore operation of the woodworking equipment (W1) (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emissions limitation or standard, as applicable.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))

64. **Compliance Assurance Monitoring (CAM) –** Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to: monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(2))

65. **Compliance Assurance Monitoring (CAM)** - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the DEQ and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
(9 VAC 5-80-110 E and 40 CFR 64.7(e))

66. **Compliance Assurance Monitoring (CAM)** - If more than three exceedances or excursions from the indicator range specified in the Compliance Assurance Plan for the fabric filters (BH1- BH7) [Attachment A] occur within a two week period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:

    a. Improved preventative maintenance practices;

    b. Process operation changes;

    c. Appropriate improvements to control methods;

    d. Other steps appropriate to correct control performance; and

    e. More frequent or improved monitoring.

    (9 VAC 5-80-110 E and 40 CFR 64.8(a) and (b))

67. **Recordkeeping –** The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. Monthly and annual throughput (board feet) of wood used for the manufacture of wood cabinets, calculated monthly as required by Condition 53.

    b. A log of fabric filter (BH1- BH7) pressure drop readings recorded once per day per fabric filter as required in Condition 58.

    c. Documentation of monitoring required by the Fabric Filter CAM Plan (Attachment A), to include but not limited to:

(1) Daily visible emissions observation records for each fabric filter including date, time, and name of trained person performing each observation.

(2) Method 9 Visible Emissions Evaluation results.

(3) Monthly and annual inspection logs including date, time, and name of person performing each inspection, list of items inspected, bag filter condition, and any maintenance or repairs performed as a result of these inspections.

(4) Record of all excursions, including date, time and corrective actions taken.

d. Results of all stack tests and visible emission evaluations.

e. Records of maintenance, operating procedures, and training as required in Condition 57.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-50-50, 9 VAC 5-80-110 and Condition 38 of 11/18/02 Permit as amended 10/13/17)

68. **Compliance Assurance Monitoring (CAM) Recordkeeping –** The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plant (QIP) required pursuant to §64.8 and any activities undertaken to implement a QIP, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 E and 40 CFR 64.9 (b))

69. **Testing –** The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports, safe sampling platforms, and access at the appropriate locations shall be provided when requested.
(9 VAC 5-50-30, 9 VAC 5-80-110, and Condition 48 of 11/18/02 Permit as amended 10/13/17)

70. **Testing –** Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the fabric filters (BH1- BH7) to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.
(9 VAC 5-80-110 and Condition 47 of 11/18/02 Permit as amended 10/13/17)

71. **Testing –** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

72. **Compliance Assurance Monitoring (CAM) Reporting –** The permittee shall submit CAM reports as part of the Title V semi-annual monitoring reports required by General Condition 131 of this permit to the DEQ. Such reports shall include at a minimum:

    a. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

    b. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
    c. A description of actions taken to implement a QIP during the reporting period as specified in §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

    (9 VAC 5-80-110 F and 40 CFR 64.9 (a))

Finishing Operation Requirements – Unit F1

73. **Limitations –** Particulate emissions from each finishing operation spray booth, including emissions during the rigid thermofoil (RTF) production process, shall be controlled by either dry filters or a combination of water wash and dry filters. The water wash and filters shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 14 of 11/18/02 Permit as amended 10/13/17)

74. **Limitations –** Particulate emissions from the automatic sealer sander shall be controlled by a fabric filter baghouse (BH6). The baghouse shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 15 of 11/18/02 Permit as amended 10/13/17)

75. **Limitations –** The permittee shall continually seek new technology to include, but not be limited to: selection and use of finishes with less photochemically reactive solvents, spraying equipment and techniques with improved transfer efficiencies and water-base coatings when technically and economically acceptable and available to the industry. Status reports addressing each emerging technology shall be submitted to DEQ by the 1st of March and September each year.
(9 VAC 5-80-110 and Condition 40 of 11/18/02 Permit as amended 10/13/17)

76. **Limitations –** VOC emissions from the finishing operations shall be controlled by the use of lower VOC finishes and/or routing VOC emissions from the sealer and/or topcoat booths to a regenerative thermal oxidizer (RTO). The RTO shall be provided with adequate access for inspection.
(9 VAC 5-80-110 and Condition 16 of 11/18/02 Permit as amended 10/13/17)

77. **Limitations –** The finishing operations RTO shall maintain a VOC emissions destruction efficiency of no less than 95.0 percent, on a mass basis.
(9 VAC 5-80-110 and Condition 18 of 11/18/02 Permit as amended 10/13/17)

78. **Limitations –** The enclosure for the RTO controlled finishing operations shall have a capture efficiency of 95.0 percent, as determined by an approved negative pressure enclosure procedure, or alternate methods as approved by the DEQ.
(9 VAC 5-80-110 and Condition 19 of 11/18/02 Permit as amended 10/13/17)

79. **Limitations –** The finishing operations RTO shall maintain a minimum combustion zone temperature equal to or higher than that determined during the most recent performance test and a residence time of at least 0.9 second. The minimum combustion zone temperature shall be calculated as a three-hour average. Details concerning the method of calculating the three-hour average combustion zone temperature shall be arranged with the DEQ.
(9 VAC 5-80-110 and Condition 20 of 11/18/02 Permit as amended 10/13/17)

80. **Limitations –** The approved fuel for the RTO is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 26 of 11/18/02 Permit as amended 10/13/17)

81. **Limitations –** VOC emissions from the use of glue (two-part dispersion adhesive (Jowapur 150.17 or equivalent) and hardener (Jowat Hardener 195.40 or equivalent) or one-part adhesive (Jowapur 150.55 or equivalent)) during the RTF production process in the RTF adhesive spray booth are limited to 0.33 lb VOC/gal as applied, on a daily average. A change in the product specifications of the glue may require a permit to modify and operate. (9 VAC 5-80-1180 and Condition 17 of 11/18/02 Permit as amended 10/13/17)

82. **Limitations –** The total annual throughput of VOC to the finishing operations shall not exceed the quantity as determined by the following equation:

$$X + Y\left(1 - \frac{OCE}{100}\right) \leq 463\ tons$$

……..Equation 3

X	=	VOC throughput to uncontrolled finishing operations (tons)
Y	=	VOC throughput to RTO controlled finishing operations (tons)
OCE	=	overall VOC control efficiency (capture & control ≥ 90%)

Total VOC throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. The OCE shall be determined based on the most recent DEQ approved performance test results for the enclosure and RTO required by Conditions 102 and 104.
(9 VAC 5-80-110 and Condition 22 of 11/18/02 Permit as amended 10/13/17)

83. **Limitations –** The total annual throughput of the glue for the finishing operations RTF adhesive spray booth for the production of RTF cabinet components shall not exceed 7,950 gallons, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9 VAC 5-80-1180 and Condition 23 of 11/18/02 Permit as amended 10/13/17)

84. **Limitations –** Emissions from the finishing operations, including emissions from the production of RTF cabinet components, shall not exceed the limits specified below:

Particulate Matter (PM)	3.0 lbs/hr	9.0 tons/yr
PM-10	3.0 lbs/hr	9.0 tons/yr
PM-2.5	3.0 lbs/hr	9.0 tons/yr
VOC		463 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 73, 74, 76, 77, 78, 79, 81, 82, and 83.
(9 VAC 5-80-110 and Condition 24 of 11/18/02 Permit as amended 10/13/17)

85. **Limitations –** Visible emissions from the finishing operations RTO exhaust shall not exceed five percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-110 and Condition 27 of 11/18/02 Permit as amended 10/13/17)

86. **Limitations –** Visible emissions from the finishing operations exhausts shall not exceed five percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-110 and Condition 25 of 11/18/02 Permit as amended 10/13/17)

87. **Limitations –** The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

    b. Maintain an inventory of spare parts.

    c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    (9 VAC 5-80-110 and Condition 53 of 11/18/02 Permit as amended 10/13/17)

88. **Monitoring –** The permittee shall determine compliance with the VOC limit in Condition 84 by calculating the VOC emissions as follows:

$$E = \sum_{i=1}^{n} \left[M_{ciu} W_{oi} + M_{cic} W_{oi} \left(1 - \frac{OCE}{100}\right) \right]$$

……..Equation 4

E = the VOC emissions in pounds per time period

M_{ciu} = the total mass (lb) of each finishing material (i) applied during each time period as determined from facility records in an uncontrolled setting.

M_{cic} = the total mass (lb) of each finishing material (i) applied during each time period as determined from facility records in a controlled setting.

W_{oi} = the weight fraction of VOC applied of each finishing material (i) applied during each time period.

OCE = the overall VOC control efficiency.

Annual VOC emissions shall be calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-110)

89. **Monitoring –** The finishing operations RTO shall be equipped with a device to continuously measure and record the combustion zone temperature. The monitoring device shall be installed, maintained, calibrated, and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the RTO is operating.
(9 VAC 5-80-110 and Condition 21 of 11/18/02 Permit as amended 10/13/17)

90. **Monitoring –** Each dry filter (F01 - F06) shall be equipped with a device to continuously measure the differential pressure drop across the filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the filter is operating. The permittee shall establish a normal operating range for the differential pressure drop across each dry filter, based on manufacturer's recommendations or developed from observations recorded from the monitoring devices during normal operation. The permittee shall maintain written documentation of these ranges.

    The monitoring device used to continuously measure differential pressure across the filters (F01- F06) shall be observed by the permittee with a frequency of not less than once per day of operation. If the observed differential pressure drop is outside the normal operating range, the permittee shall take corrective action to restore the pressure drop to within the normal operating range. The inspections shall include a check of correct filter placement, filter condition, observation of the pressure drop across the filters, and any corrective measures taken. The permittee shall keep a log of these observations for each filter.
    (9 VAC 5-80-110)

91. **Compliance Assurance Monitoring (CAM) –** The permittee shall monitor, operate, calibrate, and maintain the RTO controlling the finishing operations (F1) as specified in Attachment B (Regenerative Thermal Oxidizer Compliance Assurance Plan).

(9 VAC 5-80-110 E and 40 CFR 64.6 (c))

92. **Compliance Assurance Monitoring (CAM) –** The permittee shall conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
(9 VAC 5-80-110 and 40 CFR 64.6 (c))

93. **Compliance Assurance Monitoring (CAM) –** At all times, the permittee shall maintain the monitoring equipment, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
(9 VAC 5-80-110 E and 40 CFR 64.7 (b))

94. **Compliance Assurance Monitoring (CAM) –** Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the finishing equipment (F1) is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of compliance assurance monitoring, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by inadequate maintenance or improper operation are not malfunctions.
(9 VAC 5-80-110 E and 40 CFR 64.7 (c))

95. **Compliance Assurance Monitoring (CAM) –** Upon detecting an excursion or exceedance, the permittee shall restore operation of the finishing equipment (F1) (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup and shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator, designated condition, or below the applicable emissions limitation or standard, as applicable.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(1))

96. **Compliance Assurance Monitoring (CAM) –** Determination that acceptable procedures were used in response to an excursion or exceedance will be based on information available, which may include but is not limited to: monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
(9 VAC 5-80-110 E and 40 CFR 64.7 (d)(2))

97. **Compliance Assurance Monitoring (CAM)** - If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the DEQ and, if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
(9 VAC 5-80-110 E and 40 CFR 64.7(e))

98. **Compliance Assurance Monitoring (CAM)** - If more than six exceedances or excursions from the indicator range specified in the Compliance Assurance Plan for the RTO [Attachment B] occur within any semi-annual reporting period, the permittee shall develop, implement and maintain a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. If a QIP is required, the permittee shall have it available for inspection. The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following, as appropriate:

    a. Improved preventative maintenance practices;

    b. Process operation changes;

    c. Appropriate improvements to control methods;

    d. Other steps appropriate to correct control performance; and

    e. More frequent or improved monitoring.

    (9 VAC 5-80-110 E and 40 CFR 64.8(a) and (b))

99. **Recordkeeping –** The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with DEQ. These records shall include, but are not limited to:

    a. Globally Harmonized System Safety Data Sheets, Material Safety Data Sheets, Certified Product Data Sheets, or other vendor information as approved by DEQ showing the contents and associated concentrations for all materials that may be emitted and are used in the permitted equipment operations.

    b. Monthly and annual emissions (tons) for the finishing operations (F1), calculated monthly as required by Condition 84. Emissions shall be based on a materials balance, including the throughput and emissions. Particulate emissions for the finishing operations shall be based on respective transfer and control efficiencies. VOC emission

calculations for the finishing operations RTO exhaust shall reflect the control efficiency established during the most recent DEQ approved performance test. Calculations shall also account for any VOC emissions from the bypass stack due to malfunctions.

c. Hourly particulate emissions (pounds) for the finishing operations (F1), calculated monthly as required by Condition 84. Emissions shall be based on a material balance, including the throughput and emissions. Hourly throughput and emissions shall be calculated as an average based on solids throughput divided by finishing operations total hours of operation for each calendar month.

d. Daily operating hours for the finishing operations (F1), and sealer and topcoat booths, showing RTO operating status, recorded daily.

e. Finishing control device (F01- F06) inspection results including the date, time, and name of the person performing each inspection, whether or not filters were replaced, the pressure drop across each finishing control device and any maintenance or repairs performed as a result of these inspections as required by Condition 90.

f. Monthly and annual throughput (gallons) of all glue compounds (dispersion adhesive and hardener) for the production of rigid RTF cabinet components for the finishing operations (F1) RTF adhesive spray booth, calculated monthly as required by Condition 83.

g. Monthly and annual throughput (tons) of VOC for the finishing operations (F1), calculated monthly as required Condition 82.

h. Monthly and annual throughput (tons) of VOC for the finishing operations (F1) sealer and topcoat booths, calculated monthly as required by Condition 82.

i. Monthly and annual throughput (tons) of VOC for the finishing operations (F1) that are not RTO controlled, calculated monthly as required Condition 82.

j. Hourly combustion zone temperature for the finishing operations (F1) RTO, calculated hourly as a three-hour average as required by Condition 79.

k. Monthly records of any three-hour period which the combustion temperature of the finishing operations (F1) RTO is below the combustion zone temperature determined during the most recent performance test in which the VOC control efficiency required by Condition 77 was achieved and the total hours of the RTO operation. The permittee shall record causes for any excursion and corrective actions taken.

l. Operation and control device monitoring records, as required by Condition 89.

m. Records demonstrating compliance with the VOC content limit for the glue and hardener used in the RTF process as required by Condition 81.

n. Documentation of monitoring required by the RTO CAM Plan (Attachment B) that is not specified above, to include but not limited to:

(1) The annual temperature accuracy check as required for Indicator 1.

(2) Annual inspection logs as required for Indicator 2, including date, time, and name of person performing each inspection, list of items inspected, and any maintenance or repairs performed as a result of the inspection.

(3) Record of all excursions, including date, time and corrective actions taken.

o. Results of all stack tests and visible emissions observations and/or evaluations.

p. Records of maintenance, operating procedures, and training as required in Condition 87.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 and Conditions 38 of 11/18/02 Permit as amended 10/13/17)

100. **Compliance Assurance Monitoring (CAM) Recordkeeping –** The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plant (QIP) required pursuant to §64.8 and any activities undertaken to implement a QIP, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110 E and 40 CFR 64.9 (b))

101. **Testing –** The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports, safe sampling platforms, and access at the appropriate locations shall be provided when requested.
(9 VAC 5-80-110 and Condition 48 of 11/18/02 Permit as amended 10/13/17)

102. **Testing –** The permittee shall perform additional performance tests on a biennial basis to demonstrate compliance with the VOC emission limit and control efficiency requirements contained in Conditions 77 and 84. If two consecutive performance tests demonstrate compliance with the VOC emission limit and the control efficiency requirement, the permittee may request a revised testing schedule no less frequent than once each five-year period. The details for the tests shall be arranged with DEQ.
(9 VAC 5-80-110 and Condition 44 of 11/18/02 Permit as amended 10/13/17)

103. **Testing** - Concurrently with the subsequent performance tests required in Condition 102, Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A,

Method 9, shall be conducted by the permittee on the finishing operations RTO exhaust. Each test shall consist of 30 sets of 24 consecutive observations (at 15-second intervals) to yield a six-minute average. The details of the tests are to be arranged with DEQ. The permittee shall submit a test protocol at least 30 days prior to testing. Should conditions prevent concurrent opacity observations, DEQ shall be notified in writing within seven days and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. One copy of the test results shall be submitted to DEQ within 45 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-80-110 and Condition 45 of 11/18/02 Permit as amended 10/13/17)

104. **Testing** - An approved negative pressure enclosure procedure, or alternate methods as approved by the DEQ, shall be conducted by the permittee on the enclosure for the finishing operations sealer and topcoat booths, concurrently with the stack testing required in Condition 102. The details of the test are to be arranged with the DEQ. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the DEQ within 60 days after the test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-80-110 and Condition 46 of 11/18/02 Permit as amended 10/13/17)

105. **Testing –** Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the fabric filter (BH6) and the finishing operations exhausts to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with DEQ.
(9 VAC 5-80-110 and Condition 47 of 11/18/02 Permit as amended 10/13/17)

106. **Testing –** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

107. **Reporting –** Quarterly, the permittee shall submit material balance reports to DEQ showing the monthly input and output for stains, sealers, top coats, touch-up finishes, and clean-up solvents. The reports shall include gallons of material used by type, density of each product, and percent VOC by weight. The permittee shall submit material balance reports to the DEQ in accordance with the following schedule:

Time Period Covered by Report	Report Due Date
January 1 – March 31	June 1
April 1 – June 30	September 1
July 1 – September 30	December 1
October 1 – December 31	March 1

The reports due on March 1 and September 1 shall contain the following information:

a. The monthly and annual throughput (in gallons), density, and percent VOC by weight of each stain, sealer, top coats, touch-up finish, and clean-up solvent used by the facility.

b. The monthly and annual emissions (in pounds) of VOC from the finishing operation as calculated in Condition 88.

(9 VAC 5-80-110 and Condition 39 of 11/18/02 Permit as amended 10/13/17)

108. **Reporting –** The permittee shall submit a status report addressing each emerging technology identified according to the requirements of Condition 75.
(9 VAC 5-80-110 and Condition 40 of 11/18/02 Permit as amended 10/13/17)

109. **Compliance Assurance Monitoring (CAM) Reporting –** The permittee shall submit CAM reports as part of the Title V semi-annual monitoring reports required by General Condition 131 of this permit to the DEQ. Such reports shall include at a minimum:

a. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

b. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

c. A description of actions taken to implement a QIP during the reporting period as specified in §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

(9 VAC 5-80-110 and 40 CFR 64.9 (a))

110. **Notifications –** The permittee shall furnish written notification to the DEQ of:

a. The actual date on which replacement of finishing operations (F1) commenced within 30 days after such date. These notification must also include the anticipated start-up date of finishing operations;

b. The actual shutdown date of the replaced finishing operations, within 30 days after such date;

c. The actual start-up date of the replacement finishing operations, within 15 days after such date;

d. The actual start-up date of the finishing operations RTO, within 15 days after such date; and

e. The anticipated date of initial and continuing performance tests and visible emission evaluations, required by Conditions 101 through 106, for the finishing operations, postmarked at least 30 days prior to such date.

(9 VAC 5-80-110 and Condition 49 of 11/18/02 Permit as amended 10/13/17)

Dry Kiln Requirements – Units DK1 & DK2

111. **General Compliance Requirements** - The permittee shall operate in compliance with 40 CFR Part 63, Subpart DDDD, National Emission Standards for Hazardous Pollutants: Plywood and Composite Wood Products. A current copy of 40 CFR Part 63, Subpart DDDD can be found at http://www.ecfr.gov/ under Title 40.

(9 VAC 5-80-110, 9 VAC 5-60-100, and 40 CFR Part 63, Subpart DDDD)

Facility Wide Conditions for Hazardous Air Pollutant Emissions

The following terms and conditions are from 40 CFR Part 63, Subpart JJ. A current copy of 40 CFR Part 63, Subpart JJ can be accessed at http://www.ecfr.gov/ by selecting Title 40. As used in this section, all terms shall have the meaning as defined in §63.2 and §63.801.

112. **Limitations –** Volatile Hazardous Air Pollutant (VHAP) emissions from the facility shall not exceed the following limits:

a. For finishing operations use any of the following methods:

(1) Achieve a weighted average VHAP content across all coatings of 0.8 lb VHAP/lb solids, as applied.

(2) Use compliant finishing materials that meet the following specifications:

(i) Each sealer and topcoat has a VHAP content of no more than 0.8 lb VHAP/lb solids, as applied;

(ii) Each stain has a VHAP content of no more than 1.0 lb VHAP/lb solids, as applied;

(iii) Each thinner contains no more than 10.0 percent HAP by weight except where excluded by part (v) of this sub-section. For purposes of calculating thinner content of this section, VHAP equals HAP;

(iv) Each washcoat, basecoat, and enamel that is purchased pre-made (i.e. not formulated onsite by thinning another finishing material) has a VHAP content of no more than 0.8 lb VHAP/lb solids, as applied; and

(v) Each washcoat, basecoat, and enamel that is formulated onsite must be formulated using a finishing material containing no more than 0.8 lb VHAP/lb solids and a thinner containing no more than 3.0 percent HAP by weight.

(3) Use any combination of averaging and compliant coatings such that no greater than 0.8 lb of VHAP is being emitted per lb of solids used.

b. For cleaning operations, strippable spray booth coatings shall contain no more than 0.8 lb VOC/lb solids, as applied.

c. Compliant contact adhesives shall be used based on the following criteria:

(1) For aerosol adhesives, as well as hot melt, PVA, and urea-formaldehyde adhesives, and for contact adhesives applied to nonporous substrates, there is no limit on the VHAP content of these adhesives;

(2) For foam adhesives used in products that meet flammability requirements, the VHAP content shall be no more than 0.2 lb VHAP/lb solids, as applied;

(3) For all other contact adhesives, the VHAP content shall be no more than 0.2 lb VHAP/lb solids, as applied.

d. The permittee shall comply with limits on formaldehyde emissions by using one of the following methods:

(1) Limit total formaldehyde (F_{total}) used in all coatings and contact adhesives to no more than 400 pounds per rolling 12-month period; or

(2) Use coatings and contact adhesives only if they have a product concentration of no more than 1.0 percent formaldehyde by weight.

(9 VAC 5-80-110, 40 CFR 63.802 (b), Table 3 of 40 CFR 63, Subpart JJ, and Condition 30 of 11/18/02 Permit as amended 10/13/17)

113. **Limitations –** The permittee shall develop and implement the following work practice standards:

a. Work practice implementation plan – The permittee shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for the finishing operations (F1) and addresses each of the work practice standards presented in Conditions 113.b through 113.l that follow. The plan shall be developed no more than 60 days after start-up. The written work practice implementation plan shall be available for inspection by the DEQ upon request. If the DEQ determines that the work practice implementation plan does not adequately address each of the topics specified in §63.803 or that the plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the DEQ may require the permittee to modify the plan. Revisions or modifications to the plan do not require a revision of the source's permit(s).

b. Operator training course – The permittee shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and washoff operations, who use manufacturing equipment in these operations, or who implement the requirements of 40 CFR Part 63, Subpart JJ. All new personnel shall be trained upon hiring. All existing personnel shall be trained within six months of the finishing operations start-up. All personnel shall be given refresher training annually. The permittee shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:

(1) A list of all current personnel by name and job description that are required to be trained;

(2) An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;

(3) Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning

and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and

(4) A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.

c. Inspection and maintenance plan – The permittee shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:

(1) A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic HAP solvents;

(2) An inspection schedule;

(3) Methods for documenting the date and results of each inspection and any repairs that were made; and

(4) The time frame between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:

(i) A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and

(ii) Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

d. Cleaning and washoff solvent accounting system – The permittee shall develop an organic HAP solvent accounting form to record:

(1) The quantity and type of organic HAP solvent used each month for washoff and cleaning, as defined in §63.801;

(2) The number of pieces washed off, and the reason for the washoff; and

(3) The quantity of spent organic HAP solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.

e. Chemical composition of cleaning and washoff solvents – The permittee shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 of 40 CFR Part 63, Subpart JJ in concentrations subject to MSDS reporting as required by OSHA.

f. Spray booth cleaning – The permittee shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors,

continuous coaters and their enclosures, or metal filters, or plastic filters, unless the spray booth is being refurbished. If the spray booth is being refurbished (i.e. the spray booth coating or other protective material used to cover the booth is being replaced), the permittee shall use no more than 1.0 gallon of organic HAP solvent per booth to prepare the surface of the booth prior to applying the booth coating.

g. Storage requirements – The permittee shall use normally closed containers for storing finishing, gluing, cleaning, and washoff materials.

h. Application equipment requirements – The permittee shall not use conventional air spray guns. Conventional air spray is defined as a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization.

i. Line cleaning – The permittee shall pump or drain all organic HAP solvent used for line cleaning into a normally closed container.

j. Gun cleaning – The permittee shall collect all organic HAP solvent used to clean spray guns into a normally closed container.

k. Washoff operations – The permittee shall control emissions from washoff operations by:

(1) Using normally closed tanks for washoff; and

(2) Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.

l. Formulation assessment plan for finishing operations – The permittee shall prepare and maintain with the work practice implementation plan a formulation assessment plan that:

(1) Identifies VHAP from the list presented in Table 5 of 40 CFR Part 63, Subpart JJ that are being used in the finishing operations (F1).

(2) Establishes a baseline level of usage for each VHAP identified by Condition 113.l(1) through 113.l(6).

(3) Tracks the annual usage of each VHAP identified in Condition 113.l(1) that is present in amounts subject to MSDS reporting as required by OSHA.

(4) If the annual usage of the VHAP identified in Condition 113.l(1) exceeds its baseline level, then the permittee shall provide a written notification to the DEQ that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the permittee from further action, unless the finishing operations is not in compliance with any State regulations or requirements for that VHAP:

(i) The exceedance is no more than 15.0 percent above the baseline level;

(ii) Usage of the VHAP is below the de minimis level presented in Table 5 of 40 CFR Part 63, Subpart JJ for that VHAP;

(iii) The affected source is in compliance with its State's air toxic regulations or guidelines for the VHAP; or

(iv) The source of the pollutant is a finishing material with a VOC content of no more than 1.0 lb VOC/lb solids, as applied.

(5) If none of the explanations listed in 113.l(4) above are the reason for the increase, the permittee shall confer with the DEQ to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality, and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the DEQ and the permittee. If there are no practical and reasonable solutions, the facility need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce the usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan, and a schedule for submitting notification of progress.

(6) If the permittee uses a VHAP of potential concern listed in Table 6 of 40 CFR Part 63, Subpart JJ for which a baseline level has not been previously established, then the baseline level shall be established as the de minimis level provided in that same table for that chemical. The permittee shall track the annual usage of each VHAP of potential concern identified that is present in amounts subject to MSDS reporting as required by OSHA. If usage of the VHAP of potential concern exceeds the de minimis level listed in Table 6 of 40 CFR Part 63, Subpart JJ for that chemical, then the permittee shall provide an explanation to the DEQ that documents the reason for the exceedance of the de minimis level. If the explanation is not one of those listed in Condition 113.l(4), the permittee shall follow the procedures established in Condition 113.l(5).

(9 VAC 5-80-110, 40 CFR 63.803, 40 CFR 63, Subpart JJ, and Condition 31 of 11/18/02 Permit as amended 10/13/17)

114. **Limitations** - The permittee shall meet the following operation and maintenance requirements:

a. At all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the facility, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.

b. Malfunctions shall be corrected as soon as practicable after their occurrence.

c. Operation and maintenance requirements established pursuant to section 112 of the Clean Air Act are enforceable independent of emissions limitations or other requirements in relevant standards.

d. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(9 VAC 5-80-110, 40 CFR 63.802 (c), 40 CFR 63.6(e), 40 CFR 63, Subpart JJ, and Condition 32 of 11/18/02 Permit as amended 10/13/17)

115. **Monitoring –** Continuous compliance with the VHAP emissions limits in Condition 112 shall be determined as follows:

a. For finishing operations when averaging is being used to show continuous compliance, the permittee shall submit the results of the averaging calculation (Equation 1) for each month within that semiannual period and a compliance certification with the semiannual report required by Condition 119. The compliance certification shall state that the value of (E), as calculated by Equation 5 below, is no greater than 0.8. The facility is in violation of the standard if E is greater than 0.8 for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.

$$E = (M_{c1}C_{c1} + M_{c2}C_{c2} + ... + M_{cn}C_{cn} + S_1W_1 + S_2W_2 + ... + S_nW_n) /(M_{c1} + M_{c2} + ... + M_{cn})$$

……..Equation 5

E = the emission limit achieved by an emission point or a set of emission points, in lb VHAP / lb solids.

M_c = the mass of solids in a finishing material or coating (c) used monthly, including exempt finishing materials and coatings (lb solids / month).

C_c = the VHAP content of a finishing material or coating (c), in pounds VHAP / pound coating solids.

S = the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials or coatings.

W = the amount of solvent, in pounds, added to finishing materials and coatings during the monthly averaging period.

The Emission Limit (E in lb VHAP / lb solids) equals the sum, for all finishing materials and coatings, of the mass of solids in each material used within that month (M_c in lb

solids / month) multiplied by the VHAP content in each material (C_c in lb VHAP / lb solids) plus the sum, for all solvents, of the mass of solvent used monthly (W in lb solvent / month) multiplied by the weight fraction of VHAP in the solvent (S in lb VHAP / lb solvent), with this total being divided by the sum, for all finishing materials and coatings, of the mass of solids in each finishing material and coating used within that month (M_c in lb solids / month).

b. For finishing operations where compliant coatings are being used to show continuous compliance, the permittee shall use compliant coatings and thinners, maintain records that demonstrate the finishing materials and thinners are compliant, and submit a compliance certification with the semiannual report which states that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as stated in Condition 112, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. The facility is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.

c. For finishing operations when compliant coatings are being used to show continuous compliance and the coatings are being applied using continuous coaters, the permittee shall demonstrate continuous compliance by either:

(1) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir and the VHAP content as calculated from records, and compliant thinners, and submit a compliance certification with the semiannual report which states that compliant coatings have been used each day in the semiannual reporting period, or otherwise identify the days of noncompliance and the reasons for noncompliance. The facility is in violation of the standard whenever a noncompliant coating, as determined by records or by a sample of the coating, is used. Use of a noncompliant coating is a separate violation for each day the noncompliant coating is used.

(2) Using compliant coatings, as determined by the VHAP content of the coating in the reservoir, using compliant thinners, maintaining a viscosity of the coating in the reservoir that is no less than the viscosity of the initial coating by monitoring the viscosity with a viscosity meter or by testing the viscosity of the initial coating and retesting the coating in the reservoir each time solvent is added, maintaining records of solvent additions, and submitting a compliance certification with the semiannual report which states that compliant coatings, as determined by the VHAP content of the coating in the reservoir, have been used each day in the semiannual reporting period. Additionally, the certification shall state that the viscosity of the coating in the reservoir has not been less than the viscosity of the initial coating (i.e. the coating that is initially mixed and placed in the reservoir) for any day in the semiannual reporting period. The facility is in violation of the standard when a sample of the as-applied coating exceeds the applicable limit, as determined using 40 CFR 63, Method 311 or the viscosity of the coating in the reservoir is less than the viscosity of the initial coating.

d. For contact adhesive operations where compliant adhesives are being used to show compliance, the permittee shall submit a compliance certification with the semiannual report that states compliant contact and/or foam adhesives have been used each day in the semiannual reporting period, or otherwise identify each day noncompliant contact and/or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.

e. For strippable spray booth coatings, the permittee shall submit a compliance certification with the semiannual report that states compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or otherwise identify each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the standard.

f. For work practice standards listed in Condition 113, the permittee shall submit a compliance certification with the semiannual report that states the work practice implementation plan is being followed, or otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that the permittee is required to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a violation and the DEQ may require the permittee to modify the plan (see Condition 113.a).

g. For formaldehyde emissions, the permittee shall demonstrate compliance by one of the following methods:

(1) Calculate total formaldehyde emissions from all finishing materials and contact adhesives used at the facility using Equation 6 below and maintain a value of F_{total} no more than 400 pounds per rolling 12-month period.

$$F_{total} = (C_{f1}V_{c1} + C_{f2}V_{c2} + ... + C_{fn}V_{cn} + G_{f1}V_{g1} + G_{f2}V_{g2} + ... + G_{fn}V_{gn})$$

……..Equation 6

F_{total} = total formaldehyde emissions in each rolling 12-month period.

C_f = the formaldehyde content of a finishing material (c) in pounds of formaldehyde / gallon of coating (lb/gal).

V_c = the volume of formaldehyde-containing finishing material (c), in gal.

G_f = the formaldehyde content of a contact adhesive (g), in pounds of formaldehyde / gallon of contact adhesive (lb/gal).

V_g = the volume of formaldehyde-containing contact adhesive (g), in gal.

(2) Use coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives maintaining a certified product data sheet for each coating and contact adhesive used as required by Condition 116.a(1) and submit a compliance certification with the semiannual report that states low-formaldehyde coatings and contact adhesives, as applicable, have been used each day in the semiannual reporting period or otherwise identify the periods of noncompliance and the reasons for noncompliance. The permittee is in violation of the standard whenever a coating or contact adhesive that is not low-formaldehyde, as demonstrated by records or by a sample of the coating or contact adhesive, is used. Use of a noncompliant coating or contact adhesive is a separate violation for each day the noncompliant coating or contact adhesive is used.

All compliance certifications submitted with the semiannual report shall be signed by a responsible official of the company that owns or operates the facility.
(9 VAC 5-80-110, 40 CFR 63.804 (g) and (h), 40 CFR 63, Subpart JJ, and Condition 33 of 11/18/02 Permit as amended 10/13/17)

116. **Recordkeeping –** The permittee shall maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

a. To show compliance with the emission limits in Condition 112, the permittee shall maintain the following:

(1) A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in Condition 112;

(2) The VHAP content, in lb VHAP / lb solids, as applied, of each finishing material and contact adhesive subject to the emission limits in Conditions 112.a and 112.c;

(3) The VOC content, in lb VOC / lb solids, as applied, of each strippable booth coating subject to the emission limits in Condition 112.b; and

(4) The formaldehyde content, in lbs/gal, as applied, of each finishing material and contact adhesive subject to the emission limits in Condition 112.d and election to comply with the 400 lb/yr limit on formaldehyde in Condition 112.d(1).

b. Following the averaging method, the permittee shall maintain copies of the averaging calculation for each month following the compliance date, as well as the data on the quantity of coatings and thinners used that is necessary to support the calculation of E in Equation 5 (as defined in Condition 115.a).

c. Following the continuous coating operations where viscosity is being used to determine compliance, the permittee shall maintain the records required by Condition 116.a as well as the following:

(1) Solvent and coating additions to the continuous coater reservoir;

(2) Viscosity measurements; and

(3) Data demonstrating that viscosity is an appropriate parameter for demonstrating compliance.

d. The permittee shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:

(1) Records demonstrating that the operator training program required by Condition 113.b is in place;

(2) Records collected in accordance with the inspection and maintenance plan required by Condition 113.c;

(3) Records associated with the cleaning solvent accounting system required by Condition 113.d;

(4) Records associated with the formulation assessment plan required by Condition 113.l; and

(5) Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.

e. The permittee shall maintain records of the compliance certifications submitted for each semiannual period following the compliance date.

f. The permittee shall maintain records of all other information submitted with the compliance status report and the semiannual reports.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-110, 40 CFR 63.806, 40 CFR 63, Subpart JJ, and Condition 34 of 11/18/02 Permit as amended 10/13/17)

117. **Testing –** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate methods in accordance with procedures approved by the DEQ or using the test methods and procedures as specified in 40 CFR 63.805.
(9 VAC 5-80-110, 40 CFR 63.805, 40 CFR 63, Subpart JJ, and Condition 35 of 11/18/02 Permit as amended 10/13/17)

118. **Reporting –** Each time a notification of compliance status is required (see Conditions 129 through 131), the permittee shall submit to the DEQ a notification of compliance status, signed by a responsible official of the company that owns or operates the facility who shall certify its accuracy, attesting to whether the source has complied with 40 CFR Part 63, Subpart JJ. The notification shall list:

a. The methods that were used to determine compliance;

b. The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;

c. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;

d. The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times and in accordance with the test methods specified;

e. An analysis demonstrating whether the facility is a major source or an area source (using the emissions generated for this notification);

f. A statement by the permittee as to whether the facility has complied with Subpart JJ as expressed in this permit.

Copies of each notification shall be sent to:

U. S. EPA Region III
Air Protection Division
ATTN: Wood Furniture NESHAP Coordinator
1650 Arch Street
Philadelphia, PA 19103

(9 VAC 5-80-110, 40 CFR 63.9 (h), 40 CFR 63, Subpart JJ, and Condition 36 of 11/18/02 Permit as amended 10/13/17)

119. **Reporting –** The permittee when demonstrating continuous compliance shall submit a report covering the previous six months of wood furniture manufacturing operations:

a. Reports shall be submitted no later than March 1 and September 1 of each calendar year.

b. The semiannual reports shall include the information required by Condition 115, a statement of whether the facility was in compliance or noncompliance, and, if the facility was in noncompliance, the measures taken to bring the facility into compliance.

The permittee, when required to provide a written notification by Condition 113.l(4) for exceedance of a baseline level, shall include in the notification one or more statements that explains the reasons for the usage increase. The notification shall be submitted no later than 30 calendar days after the end of the annual period in which the usage increase occurred.

Copies of reports shall be submitted to the DEQ and the U.S. Environmental Protection Agency at the address given in Condition 118.

(9 VAC 5-80-110, 40 CFR 63.807, 40 CFR 63.10 (d), 40 CFR 63, Subpart JJ, and Condition 37 of 11/18/02 Permit as amended 10/13/17)

Insignificant Emission Units

120. The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
PW1, PW2, PW3	Parts Washers	5-80-720 B	VOC	---
G1	Gluing (water-based glues)	5-80-720 B	VOC	---
RTF	Rigid Thermo Foil (RTF) Membrane Press	5-80-720 B	VOC	---

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Permit Shield & Inapplicable Requirements

121. Compliance with the provisions of this permit shall be deemed in compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
None identified by the applicant		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the Administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by: (i) the administrator pursuant to §114 of the federal Clean Air Act; (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law; or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

General Conditions

122. **Federal Enforceability –** All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

123. **Permit Expiration –** This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

124. **Permit Expiration –** The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

125. **Permit Expiration –** If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

126. **Permit Expiration –** No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

127. **Permit Expiration –** If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

128. **Permit Expiration –** The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant to section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.
(9 VAC 5-80-80 B, C, and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

129. **Recordkeeping and Reporting –** All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

    a. The date, place as defined in the permit, and time of sampling or measurements;

    b. The date(s) analyses were performed;

    c. The company or entity that performed the analyses;

    d. The analytical techniques or methods used;

    e. The results of such analyses; and

    f. The operating conditions existing at the time of sampling or measurement.

    (9 VAC 5-80-110 F)

130. **Recordkeeping and Reporting –** Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F)

131. **Recordkeeping and Reporting –** The permittee shall submit the results of monitoring contained in any applicable requirement to the DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

    b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

        (1) Exceedance of emissions limitations or operational restrictions;

        (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

        (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110 F)

132. **Annual Compliance Certification –** Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

b. The identification of each term or condition of the permit that is the basis of the certification;

c. The compliance status;

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

e. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

f. Such other facts as the permit may require to determine the compliance status of the source; and

g. One copy of the annual compliance certification shall be submitted to the EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov.

(9 VAC 5-80-110 K.5)

133. **Permit Deviation Reporting –** The permittee shall notify the DEQ within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee

shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 131 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

134. **Failure/Malfunction Reporting –** In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the DEQ by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the DEQ.
(9 VAC 5-20-180 C)

135. **Severability –** The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

136. **Duty to Comply –** The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

137. **Need to Halt or Reduce Activity not a Defense –** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

138. **Permit Modification –** A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)

139. **Property Rights –** The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)

140. **Duty to Submit Information –** The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)

141. **Duty to Submit Information –** Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)

142. **Duty to Pay Permit Fees –** The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9 VAC 5-80-2310 through 9 VAC 5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9 VAC 5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9 VAC 5-80-110 H, 9 VAC 5-80-340 C, and 9 VAC 5-80-2340 B)

143. **Fugitive Dust Emission Standards –** During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-50-90)

144. **Startup, Shutdown, and Malfunction –** At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20 E)

145. **Alternative Operating Scenarios –** Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110 J)

146. **Inspection and Entry Requirements –** The permittee shall allow the DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

147. **Reopening For Cause –** The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80F. The conditions for reopening a permit are as follows:

    a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

    b. The permit shall be reopened if the Administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

    c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

    (9 VAC 5-80-110 L)

148. **Permit Availability –** Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
    (9 VAC 5-80-150 E)

149. **Transfer of Permits –** No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
    (9 VAC 5-80-160)

150. **Transfer of Permits –** In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
    (9 VAC 5-80-160)

151. **Transfer of Permits –** In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
    (9 VAC 5-80-160)

152. **Permit Revocation or Termination for Cause** – A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or

the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-190 C and 9 VAC 5-80-260)

153. **Duty to Supplement or Correct Application –** Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

154. **Stratospheric Ozone Protection –** If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

155. **Accidental Release Prevention –** If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

156. **Changes to Permits for Emissions Trading –** No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

157. **Emissions Trading –** Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

Fabric Filter CAM Plan (Units: BH1-BH7)

	Indicator 1	Indicator 2	Indicator 3
Indicator	**Opacity**	**Visible Emission Evaluation (optional - to determine if excursion occurs)**	**Periodic Structural Inspections**
Measurement approach	Daily visible emission observations conducted at each control device emission point.	Method 9 VEE in accordance with 40 CFR 60, Appendix A conducted optionally to determine if an excursion occurs. Results recorded upon completion of each Method 9. If visible emissions are observed by Indicator 1 and a Method 9 VEE is not conducted, then an excursion has occurred.	Monthly external bag filter inspections by a qualified employee. Results recorded monthly. Annual internal bag filter inspections by a qualified employee. Results recorded upon completion of each inspection.
Indicator range	An excursion is defined as the presence of any visible emission from the control device unless otherwise determined by a Method 9 VEE.	An excursion is defined as an average opacity greater than 5% during one six-minute period in any one hour.	An excursion is defined as failure to perform the monthly or annual inspection of bag filters. Excursions trigger an inspection, corrective action and a reporting requirement.
QIP Threshold	More than 3 excursions in a 2 week period per each control device	More than 3 excursions in a 2 week period per each control device.	Not Applicable
<u>Performance criteria:</u> Data Representativeness	Observation of visible emissions indicates possible damage to bag filter.	Observation of visible emissions greater than 5% indicates replacement or maintenance of bag filters is necessary.	Bags in the fabric filters shall be inspected visually for deterioration and remaining bag life monitored.
Verification of operational status	Records that indicate time, facility operational status and results of each observation.	Pressure drop across each filter.	Pressure drop across each filter.
QA/QC practices and criteria	Trained personnel to perform observations.	Trained personnel shall perform Method 9. One copy of the test results shall be submitted to the Valley Regional Office within 45 days after completion.	Trained personnel perform the inspection and maintenance.
Monitoring frequency and data collection procedure	Daily observation.	Upon the observation of visible emissions from any fabric filter.	Monthly and annual inspections.

Regenerative Thermal Oxidizer (RTO) CAM Plan (Unit: RTO)

	Indicator 1	Indicator 2	Indicator 3
Indicator	**Combustion Chamber Temperature**	**Annual Inspection**	**Periodic Stack Testing**
Measurement approach	The combustion zone temperature is continuously monitored by a thermocouple.	The burner and valves on the air lines leading to the regenerative beds shall be inspected annually.	After initial startup of the RTO, EPA Method 25, 25A, or 25B (40 CFR 60, Appendix A) testing shall be conducted at least once every five years to verify destruction efficiency. The enclosure's capture efficiency shall also be verified.
Indicator range	Greater than or equal to the temperature observed during the stack test demonstrating 95.0% destruction efficiency. The monitored temperature shall be a three-hour average.	The burner shall be inspected for corrosion, mechanical failure, etc. The seal integrity of the valves shall be assessed to ensure no leakage.	Greater than or equal to 95.0% VOC destruction efficiency. Greater than or equal to 95.0% capture efficiency for enclosure to the sealer booth.
QIP Threshold	Six excursions below the indicator range in any semi-annual reporting period.	N/A	N/A
<u>Performance criteria</u>: **Data representativeness**	The thermocouple is installed in the combustion chamber as an integral part of the RTO design.	Each valve and associated ductwork is inspected for any warping, splits, or other degradation that may affect the tightness of seal when each valve is closed.	Testing shall be conducted when finishing operations are representative of normal operating conditions.
Verification of operational status	N/A	N/A	N/A
QA/QC practices and criteria	An accuracy check shall be conducted at least annually by inserting a second (redundant) thermocouple probe into the incinerator chamber via a hand-held meter to verify the accuracy of the thermocouple. No accuracy check is required if the thermocouple has been replaced within the previous 12 months. The acceptance criterion is +/- 10 °F.	The RTO manufacturer or other authorized technician familiar with the operating principles of regenerative thermal oxidation units shall conduct the inspection.	Test procedures shall be as required by EPA Method 25, 25A, or 25B (40 CFR 60, Appendix A). Capture efficiency for the sealer booth enclosure shall be determined by an approved negative pressure enclosure procedure or by an alternate method approved by DEQ. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. A test protocol shall be submitted to and approved by the DEQ, prior to testing.
Monitoring frequency and data collection procedure	Temperature is measured and recorded continuously. Three-hour averages shall be calculated hourly as the average of the previous three hours of data.	The burner and valve seals shall be inspected each calendar year in which the RTO operates. Adjustments/repairs shall be made as necessary.	After initial startup of the RTO, at least once every five-year cycle of the permit. The performance tests required by Condition 102 shall satisfy this requirement.

SOURCE TESTING REPORT FORMAT

Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. *Signed by reviewer

Copy of approved test protocol

Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. *For each emission unit, a table showing:
   a. Operating rate
   b. Test Methods
   c. Pollutants tested
   d. Test results for each run and the run average
   e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

Test Results

1. Detailed test results for each run
2. *Sample calculations
3. *Description of collected samples, to include audits when applicable

Appendix

1. *Raw production data
2. *Raw field data
3. *Laboratory reports
4. *Chain of custody records for lab samples
5. *Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

* Not applicable to visible emission evaluation